

MSTAR – AN/PPS-5C Ground Surveillance Radar



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VENDOR DESCRIPTION

The AN/PPS-5C Man-Portable Surveillance and Target Acquisition Radar (MSTAR) is a versatile, low-power ground surveillance radar. MSTAR provides wide area surveillance coverage to a maximum range of 42 km, night or day, in all weather conditions with a very low probability of intercept (LPI). Its effectiveness has been demonstrated in both combat and peacekeeping missions during the Persian Gulf war and in operations in the Balkans, Afghanistan and, most recently, with the US Air Force in Iraq.

MSTAR is extremely reliable, with a proven Mean Time Between Failure of over 2000 hours. MSTAR is transportable by two men and placed into action in less than three minutes. The simple-to-operate Man Machine Interface (MMI) allows rapid self-location and surveillance area setup while providing sophisticated interface support features. MSTAR locates moving targets and uniquely classifies them as personnel, tracked or wheeled vehicle.

Over 850 units are in service worldwide in 2004.



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Business Category: Large Business

GBR

System Characteristics

Technology	Pulse Doppler MTI, GSR
Operating Frequency	17.0 GHz, 4 selectable frequencies
Weight (w/batteries)	37.4 kg or 82.2 lbs
Transmit Power	Solid State, 4W peak
Temperature	Operating -40° C to +50° C Storage -46° C to +71° C
Antenna	Parabolic 36 dB; Horizontal and Circular Polarization
Processing	Pulse Compression FFT CFAR
Data/Control Interface	RS-232, RS-422, USB, Ethernet
Scan Rate	9°/sec; 18°/sec; 45°/sec
Coverage	Multiple Azimuth Sector and up to 360° coverage
Target Classification	Automatic and Audio
Input Power	MIL-STD-1275 Vehicle Power 24 VDC, 75 watts
Continuous Operations on Single Set of Batteries	8-12 hours

Performance Characteristics

Detection Range	Personnel 12 km Vehicles 36+ km
Accuracy	Range ±10 m Azimuth ±5 mils
Max. Remote Distance	100 m - 4000 m, wireless (configuration dependent)
Detect Artillery Round Impacts	Yes, to 15 km, artillery correction
Target Capacity	100+ targets may be stored
Display latest target info for most recent target set [Target List]	100+ targets may be stored
Minimum Detectable Radial Velocity	< 1.25 m/sec
Operational Availability (Ao)	Exceeds 90%
MTBF	Over 2,000 hrs portable Over 10,000 hrs fixed
MTTR	0.5 hrs
Maintainability: 2 level BIT to LRM	
Features	Options
Built-in GPS Self-location Multilingual Displays & Instructions Ethernet Remote Interface	Wireless Remote Operation AC Power Adapter/ MIL-STD-1275 Vehicle Power Adapter Weather Enclosure/ Permanent Installation Kit